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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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SQUIRE, SANDERS & DEMPSEY L.L.P.
14TH FLOOR
8000 TOWERS CRESCENT
TYSONS CORNER, VA 22182

EXAMINER	
HO, CHUONG T	

ART UNIT	PAPER NUMBER
2616	

DATE MAILED: 10/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/599,736	STRANDBERG ET AL.	
	Examiner	Art Unit	
	CHUONG T. HO	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 July 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19 and 21-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19,21-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

1. The amendment after final rejection filed 07/31/06 have been entered and made of record.

Applicant's arguments after final rejection filed 07/31/06 have been fully considered but they are not persuasive.

In the page 17, lines 2-6, the applicant alleged that "Reininger discloses that at the server, the terminal QoS controller computes and renegotiates the bit rate necessary to maintain a desired target quality. However, there is no teaching or suggest in Reininger of negotiating at least one parameter of constraint based on an indication of the operating condition at the first router, as recited in the presently pending claims." The Applicant's argument is not persuasive.

Reininger (U.S.Patent No. 6,404,738 B1) discloses or suggests negotiating at least one parameter of constraint based on an indication of the operating condition at the first router (see col. 4, lines 25-35, in yet another preferred embodiment an application can request bandwidth from a network in terms of soft quality of service while connection is in progress, the application can also renegotiate soft quality of service requirements, and the quality of service controllers compute and negotiate bit-rates necessary to maintain quality). Therefore, Reininger discloses or suggests negotiating at least one parameter of constraint based on an indication of the operating condition at the first router.

In the page 18, lines 10-14, the applicant alleged that "Pashtan does not teach or suggest adjusting at least one parameter of constraint of incoming traffic flow based on said indication, wherein said adjusting comprises renegotiating the at least one

parameter of constraint or providing a recommendation based on the at least one parameter of constraint.

The applicant's argument is not persuasive.

Pashtan discloses or suggests adjusting at least one parameter of constraint of incoming traffic flow based on said indication (see col. 6, lines 56-60, a signaling protocol, such as signaling 450-53, may be added between network elements for back propagation traffic flow adjustment requests. The request to adjust the traffic includes information such as the selected micro flows that make up the communication flow, the current DS value, and the target DS value) (see col. 6, lines 34-36, changing states) (see col. 3, lines 28-35, adjustments).

Claims 4-7, 9, 14-18, 22-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combined system (Arunachalam – Barri – Reininger) in view of Pashtan (U.S.Patent No. 6,542,466 B1. Reininger discloses or suggests wherein said adjusting (see col. 5, lines 35-40, adjusting) comprises renegotiating (see col. 8, lines 64-67) the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint.

2. Claims 1-9, 10-18, 19, 21-27, 28-30 are pending.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art

to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 2-3, 10-11, 12-13, 19, 21, 27, 28, 29, 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arunachalam et al. (U.S.Patent No. 6,631,122 B1) in view of Barri et al. (U.S.Patent No. 6,657,962 B1) and in further view of Reininger et al. (U.S.Patent No. 6,404,738).

Regarding to claims 1, see figures 2, 3, Arunachalam et al. discloses the agent configures and enforces policies within the network device's flow handling mechanism under the QoS agent's instruction. The primary function of the agent is enforcing flow classification, marking , mapping & treatment policies (see col. 4, lines 38-43); comprising:

- Determining (flow marking) an operating condition at a first router (edge device 204 (QoS agent) , figure 2, Network QoS agent 301, figure3, col. 6, lines 1-12) in a differentiated service network having a plurality of router (edge devices 204A, 204B);
- See figure 5, col. 5, lines 40-43, propagating an indication of operating condition at first router (edge device 203) to a second router (edge device 204) (see col. 5, lines 40-43, edge device 203 (QoS agent) may communicate to edge device 204 via connections 202 in order to inform edge device 204 of a request for change of communication traffic flow priority) (see col. 5, lines 40-43, each edge device 204 acting as a router has access to a resident table of the DiffServ classes of service);

- Adjusting at least one parameter of constraint of incoming traffic based on indication (see col. 10, lines 11-14, wireless QoS agent 801 **adjusts** the weights of the fair queuing algorithm based on the knowledge of the precedence and bandwidth allocation for the traffic flow scheduled);
- Wherein adjusting comprising performing parameter mapping (see col. 6, lines 31-40, figure 3, **QoS mapping**: There are two kinds of QoS mapping namely (a) mapping customer requirements directly to a service class at either the transit network or at the third generation wireless network and (b) mapping to/from the service class of the transit network from/to service of the third generation wireless network).

However, Arunachalam et al. is silent to disclosing wherein adjusting comprises resource usage calculation.

Barri et al. discloses system for managing congestion in a network (see abstract); comprising:

adjusting comprises resource usage calculation (see col. 9, lines 33-35, adjustment for the egress flow control in accordance with present invention) (see col. 10, lines 25-38, the weight (resources usage) average is calculated).

Both Arunachalam, Barri discloses different class of service. Barri recognizes resource usage calculation. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Arunachalam with the teaching of Barri to provide resource usage calculation in order to manage the

congestion in a network. Therefore, the combined system would have been enable to timing to transmission of packets out the egress system.

However, the combined system (Arunachalam – Barri) is silent to disclosing adjust comprises renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint.

Reininger et al. discloses adjust (see col. 11, lines 30-31, the algorithm now adjusts the bandwidths of A, C, D and V and informs these connections of their new allocation) comprising renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint (see figure 7, col. 8, lines 63-67, FIG.7 depicts application QoS renegotiation across a network that uses ATM signaling.....Soft-QoS controllers 735 and 745 are connected to the ATM switches. Setup 722 and modification request 721 are made by the server (720) are made by the server to the network. Newly established connection 724 and modification availability 723 are received by the server).

Both Arunachalam, Barri, and Reininger discloses adjusting network parameters (bandwidth, rates, delay jitter, etc.). Reininger recognizes renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined system (Arunachalam – Barri) with the teaching of Reininger to provide renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint in order to provide equal bandwidth allocation.

4. Regarding to claims 10, 11, see figures 2, 3, Arunachalam et al. discloses the agent configures and enforces policies within the network device's flow handling mechanism under the QoS agent's instruction. The primary function of the agent is enforcing flow classification, marking , mapping & treatment policies (see col. 4, lines 38-43); comprising:

- Determining (flow marking) an operating condition at a first router (edge device 204 (QoS agent) , figure 2, Network QoS agent 301, figure3, col. 6, lines 1-12) in a differentiated service network having a plurality of router (edge devices 204A, 204B);
- See figure 5, col. 5, lines 40-43, propagating an indication of operating condition at first router (edge device 203) to a second router (edge device 204) (see col. 5, lines 40-43, edge device 203 (QoS agent) may communicate to edge device 204 via connections 202 in order to inform edge device 204 of a request for change of communication traffic flow priority) (see col. 5, lines 40-43, each edge device 204 acting as a router has access to a resident table of the DiffServ classes of service);
- Adjusting at least one parameter of constraint of incoming traffic based on indication (see col. 10, lines 11-14, wireless QoS agent 801 **adjusts** the weights of the fair queuing algorithm based on the knowledge of the precedence and bandwidth allocation for the traffic flow scheduled);
- Wherein adjusting comprising performing parameter mapping (see col. 6, lines 31-40, figure 3, **QoS mapping**: There are two kinds of QoS mapping namely (a)

mapping customer requirements directly to a service class at either the transit network or at the third generation wireless network and (b) mapping to/from the service class of the transit network from/to service of the third generation wireless network).

However, Arunachalam et al. is silent to disclosing wherein adjusting comprises resource usage calculation.

Barri et al. discloses system for managing congestion in a network (see abstract); comprising:

adjusting comprises resource usage calculation (see col. 9, lines 33-35, adjustment for the egress flow control in accordance with present invention) (see col. 10, lines 25-38, the weight (resources usage) average is calculated).

Both Arunachalam, Barri discloses different class of service. Barri recognizes resource usage calculation. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Arunachalam with the teaching of Barri to provide resource usage calculation in order to manage the congestion in a network. Therefore, the combined system would have been enable to timing to transmission of packets out the egress system.

However, the combined system (Arunachalam – Barri) is silent to disclosing adjust comprises renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint.

Reininger et al. discloses adjust (see col. 11, lines 30-31, the algorithm now adjusts the bandwidths of A, C, D and V and informs these connections of their new

allocation) comprising renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint (see figure 7, col. 8, lines 63-67, FIG.7 depicts application QoS renegotiation across a network that uses ATM signaling.....Soft-QoS controllers 735 and 745 are connected to the ATM switches. Setup 722 and modification request 721 are made by the server (720) are made by the server to the network. Newly established connection 724 and modification availability 723 are received by the server).

Both Arunachalam, Barri, and Reininger discloses adjusting network parameters (bandwidth, rates, delay jitter, etc.). Reininger recognizes renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined system (Arunachalam – Barri) with the teaching of Reininger to provide renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint in order to provide equal bandwidth allocation.

4. Regarding to claim 19, see figures 2, 3, Arunachalam et al. discloses the agent configures and enforces policies within the network device's flow handling mechanism under the QoS agent's instruction. The primary function of the agent is enforcing flow classification, marking , mapping & treatment policies (see col. 4, lines 38-43); comprising:

- Determining (flow marking) an operating condition at a first router (edge device 204 (QoS agent) , figure 2, Network QoS agent 301, figure3, col. 6, lines 1-12);

- See figure 5, col. 5, lines 40-43, propagating an indication of operating condition at first router (edge device 203) to a second router (edge device 204) (see col. 5, lines 40-43, edge device 203 (QoS agent) may communicate to edge device 204 via connections 202 in order to inform edge device 204 of a request for change of communication traffic flow priority) (see col. 5, lines 40-43, each edge device 204 acting as a router has access to a resident table of the DiffServ classes of service);
- An adjusting unit configured to adjust at least one parameter of constraint of incoming traffic based on indication (see col. 10, lines 11-14, wireless QoS agent 801 **adjusts** the weights of the fair queuing algorithm based on the knowledge of the precedence and bandwidth allocation for the traffic flow scheduled);
- Wherein said adjusting unit is configured to perform parameter mapping (see col. 6, lines 31-40, figure 3, **QoS mapping**: There are two kinds of QoS mapping namely (a) mapping customer requirements directly to a service class at either the transit network or at the third generation wireless network and (b) mapping to/from the service class of the transit network from/to service of the third generation wireless network).

However, Arunachalam et al. is silent to disclosing wherein adjusting comprises resource usage calculation.

Barri et al. discloses system for managing congestion in a network (see abstract); comprising:

adjusting comprises resource usage calculation (see col. 9, lines 33-35, adjustment for the egress flow control in accordance with present invention) (see col. 10, lines 25-38, the weight (resources usage) average is calculated).

Both Arunachalam, Barri discloses different class of service. Barri recognizes resource usage calculation. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Arunachalam with the teaching of Barri to provide resource usage calculation in order to manage the congestion in a network. Therefore, the combined system would have been enable to timing to transmission of packets out the egress system.

However, the combined system (Arunachalam – Barri) is silent to disclosing adjust comprises renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint.

Reininger et al. discloses adjust (see col. 11, lines 30-31, the algorithm now adjusts the bandwidths of A, C, D and V and informs these connections of their new allocation) comprising renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint (see figure 7, col. 8, lines 63-67, FIG.7 depicts application QoS renegotiation across a network that uses ATM signaling.....Soft-QoS controllers 735 and 745 are connected to the ATM switches. Setup 722 and modification request 721 are made by the server (720) are made by the server to the network. Newly established connection 724 and modification availability 723 are received by the server).

Both Arunachalam, Barri, and Reininger discloses adjusting network parameters (bandwidth, rates, delay jitter, etc.). Reininger recognizes renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined system (Arunachalam – Barri) with the teaching of Reininger to provide renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint in order to provide equal bandwidth allocation.

5. Regarding to claim 28, see figures 2, 3, Arunachalam et al. discloses the agent configures and enforces policies within the network device's flow handling mechanism under the QoS agent's instruction. The primary function of the agent is enforcing flow classification, marking , mapping & treatment policies (see col. 4, lines 38-43); comprising:

- Determining (flow marking) an operating condition at a first router (edge device 204 (QoS agent) , figure 2, Network QoS agent 301, figure3, col. 6, lines 1-12) in a differentiated service network having a plurality of router (edge devices 204A, 204B);
- See figure 5, col. 5, lines 40-43, propagating an indication of operating condition at first router (edge device 203) to a second router (edge device 204) (see col. 5, lines 40-43, edge device 203 (QoS agent) may communicate to edge device 204 via connections 202 in order to inform edge device 204 of a request for change of communication traffic flow priority) (see col. 5, lines 40-43, each edge device 204

acting as a router has access to a resident table of the DiffServ classes of service);

- Adjusting at least one parameter of constraint of incoming traffic based on indication (see col. 10, lines 11-14, wireless QoS agent 801 **adjusts** the weights of the fair queuing algorithm based on the knowledge of the precedence and bandwidth allocation for the traffic flow scheduled);
- Wherein adjusting comprising performing parameter mapping (see col. 6, lines 31-40, figure 3, **QoS mapping**: There are two kinds of QoS mapping namely (a) mapping customer requirements directly to a service class at either the transit network or at the third generation wireless network and (b) mapping to/from the service class of the transit network from/to service of the third generation wireless network).

However, Arunachalam et al. is silent to disclosing wherein adjusting comprises resource usage calculation.

Barri et al. discloses system for managing congestion in a network (see abstract); comprising:

- adjusting comprises resource usage calculation (see col. 9, lines 33-35, adjustment for the egress flow control in accordance with present invention) (see col. 10, lines 25-38, the weight (resources usage) average is calculated).

Both Arunachalam, Barri discloses different class of service. Barri recognizes resource usage calculation. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Arunachalam with the

teaching of Barri to provide resource usage calculation in order to manage the congestion in a network. Therefore, the combined system would have been enable to timing to transmission of packets out the egress system.

However, the combined system (Arunachalam – Barri) is silent to disclosing adjust comprises renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint.

Reininger et al. discloses adjust (see col. 11, lines 30-31, the algorithm now adjusts the bandwidths of A, C, D and V and informs these connections of their new allocation) comprising renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint (see figure 7, col. 8, lines 63-67, FIG.7 depicts application QoS renegotiation across a network that uses ATM signaling.....Soft-QoS controllers 735 and 745 are connected to the ATM switches. Setup 722 and modification request 721 are made by the server (720) are made by the server to the network. Newly established connection 724 and modification availability 723 are received by the server).

Both Arunachalam, Barri, and Reininger discloses adjusting network parameters (bandwidth, rates, delay jitter, etc.). Reininger recognizes renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined system (Arunachalam – Barri) with the teaching of Reininger to provide renegotiating the at least one parameter of

constraint or providing a recommendation based on the at least one parameter of constraint in order to provide equal bandwidth allocation.

6. Regarding to claim 29, see figures 2, 3, Arunachalam et al. discloses the agent configures and enforces policies within the network device's flow handling mechanism under the QoS agent's instruction. The primary function of the agent is enforcing flow classification, marking , mapping & treatment policies (see col. 4, lines 38-43); comprising:

- Determining (flow marking) an operating condition at a first router (edge device 204 (QoS agent) , figure 2, Network QoS agent 301, figure3, col. 6, lines 1-12);
- See figure 5, col. 5, lines 40-43, propagating an indication of operating condition at first router (edge device 203) to a second router (edge device 204) (see col. 5, lines 40-43, edge device 203 (QoS agent) may communicate to edge device 204 via connections 202 in order to inform edge device 204 of a request for change of communication traffic flow priority) (see col. 5, lines 40-43, each edge device 204 acting as a router has access to a resident table of the DiffServ classes of service);
- Adjusting at least one parameter of constraint of incoming traffic based on indication (see col. 10, lines 11-14, wireless QoS agent 801 **adjusts** the weights of the fair queuing algorithm based on the knowledge of the precedence and bandwidth allocation for the traffic flow scheduled);
- Wherein adjusting comprising performing parameter mapping (see col. 6, lines 31-40, figure 3, **QoS mapping**: There are two kinds of QoS mapping namely (a)

mapping customer requirements directly to a service class at either the transit network or at the third generation wireless network and (b) mapping to/from the service class of the transit network from/to service of the third generation wireless network).

However, Arunachalam et al. is silent to disclosing wherein adjusting comprises resource usage calculation.

Barri et al. discloses system for managing congestion in a network (see abstract); comprising:

- adjusting comprises resource usage calculation (see col. 9, lines 33-35, adjustment for the egress flow control in accordance with present invention) (see col. 10, lines 25-38, the weight (resources usage) average is calculated).

Both Arunachalam, Barri discloses different class of service. Barri recognizes resource usage calculation. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Arunachalam with the teaching of Barri to provide resource usage calculation in order to manage the congestion in a network. Therefore, the combined system would have been enable to timing to transmission of packets out the egress system.

However, the combined system (Arunachalam – Barri) is silent to disclosing adjust comprises renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint.

Reininger et al. discloses adjust (see col. 11, lines 30-31, the algorithm now adjusts the bandwidths of A, C, D and V and informs these connections of their new

allocation) comprising renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint (see figure 7, col. 8, lines 63-67, FIG.7 depicts application QoS renegotiation across a network that uses ATM signaling.....Soft-QoS controllers 735 and 745 are connected to the ATM switches. Setup 722 and modification request 721 are made by the server (720) are made by the server to the network. Newly established connection 724 and modification availability 723 are received by the server).

Both Arunachalam, Barri, and Reininger discloses adjusting network parameters (bandwidth, rates, delay jitter, etc.). Reininger recognizes renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined system (Arunachalam – Barri) with the teaching of Reininger to provide renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint in order to provide equal bandwidth allocation.

7. Regarding to claim 30, see figures 2, 3, Arunachalam et al. discloses the agent configures and enforces policies within the network device's flow handling mechanism under the QoS agent's instruction. The primary function of the agent is enforcing flow classification, marking , mapping & treatment policies (see col. 4, lines 38-43); comprising:

- Determining (flow marking) an operating condition at a first router (edge device 204 (QoS agent) , figure 2, Network QoS agent 301, figure3, col. 6, lines 1-12);

- See figure 5, col. 5, lines 40-43, propagating an indication of operating condition at first router (edge device 203) to a second router (edge device 204) (see col. 5, lines 40-43, edge device 203 (QoS agent) may communicate to edge device 204 via connections 202 in order to inform edge device 204 of a request for change of communication traffic flow priority) (see col. 5, lines 40-43, each edge device 204 acting as a router has access to a resident table of the DiffServ classes of service);
- Adjusting at least one parameter of constraint of incoming traffic based on indication (see col. 10, lines 11-14, wireless QoS agent 801 **adjusts** the weights of the fair queuing algorithm based on the knowledge of the precedence and bandwidth allocation for the traffic flow scheduled);
- Wherein adjusting comprising performing parameter mapping (see col. 6, lines 31-40, figure 3, **QoS mapping**: There are two kinds of QoS mapping namely (a) mapping customer requirements directly to a service class at either the transit network or at the third generation wireless network and (b) mapping to/from the service class of the transit network from/to service of the third generation wireless network).

However, Arunachalam et al. is silent to disclosing wherein adjusting comprises resource usage calculation.

Barri et al. discloses system for managing congestion in a network (see abstract); comprising:

- adjusting comprises resource usage calculation (see col. 9, lines 33-35, adjustment for the egress flow control in accordance with present invention) (see col. 10, lines 25-38, the weight (resources usage) average is calculated).

Both Arunachalam, Barri discloses different class of service. Barri recognizes resource usage calculation. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Arunachalam with the teaching of Barri to provide resource usage calculation in order to manage the congestion in a network. Therefore, the combined system would have been enable to timing to transmission of packets out the egress system.

However, the combined system (Arunachalam – Barri) is silent to disclosing adjust comprises renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint.

Reininger et al. discloses adjust (see col. 11, lines 30-31, the algorithm now adjusts the bandwidths of A, C, D and V and informs these connections of their new allocation) comprising renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint (see figure 7, col. 8, lines 63-67, FIG.7 depicts application QoS renegotiation across a network that uses ATM signaling.....Soft-QoS controllers 735 and 745 are connected to the ATM switches. Setup 722 and modification request 721 are made by the server (720) are made by the server to the network. Newly established connection 724 and modification availability 723 are received by the server).

Both Arunachalam, Barri, and Reininger discloses adjusting network parameters (bandwidth, rates, delay jitter, etc.). Reininger recognizes renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined system (Arunachalam – Barri) with the teaching of Reininger to provide renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint in order to provide equal bandwidth allocation.

8. In the claims 2, 12, 27, Arunachalam discloses first router (203) comprises a core router and second router (204) comprises an edge router (see figure 2, (see col. 4, lines 1-15)).

9. In the claims 3, 13, 21, Arunachalam et al. discloses determining an operating condition at a third router (204b); and propagating an indication of operating condition at third router to second router (204a) (see figure 2, figure 3, (see col. 4, lines 40-45)).

10. In the claim 12, claim 12 is rejected the same reason of claim 2 above.

11. In the claim 13, claim 13 is rejected the same reason of claim 3 above.

12. In the claim 21, claim 21 is rejected the same reason of claim 3 above.

13. In the claim 27, claim 27 is rejected the same reason of claim 2 above.

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

15. Claims 4-5, 6, 7-9, 14-15, 16, 17-18, 22-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combined system (Arunachalam – Barri – Reininger) in view of Pashtan (U.S.Patent No. 6,542,466 B1.

In the claims 4, 14, 24, the combined system (Arunachalam – Barri – Reininger) discloses the limitations of claim 1 above.

However, the combined system (Arunachalam – Barri – Reininger) is silent to disclosing operating condition comprises a status of stability.

Pashtan discloses operating condition comprises a status of stability (see col. 6, lines 33-35, as the network is rapidly changing states, backward propagation of request to decrease a DiffServ priority may be met by an upstream network element and the reassigned micro communication flow may then met the QoS objective at the network element where the congestion was originally detected).

Both Arunachalam, Barri, Reininger, and Pashtan discloses Quality of Service, QoS, differentiated services. Pashtan recognizes operating condition comprises a status of stability. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined system (Arunachalam – Barri – Reininger) with the teaching of Pashtan to provide operating condition comprises a status of stability in

order to manage the congestion in a network. Therefore, the combined system would have been enable to timing to transmission of packets out the egress system

16. In the claim 5, the combined system (Arunachalam – Barri – Reininger) discloses the limitations of claim 1 above.

However, the combined system (Arunachalam – Barri – Reininger) is silent to disclosing a signal corresponding to a network traffic status.

Pashtan discloses indication comprises a signal corresponding to a network traffic status (traffic flows, DiffServ values, class of service(see col. 6, lines 57- 65).

Both Arunachalam, Barri, Reininger, and Pashtan discloses Quality of Service, QoS, differentiated services. Pashtan recognizes indication comprises a signal corresponding to a network traffic status. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined system (Arunachalam – Barri – Reininger) with the teaching of Pashtan to provide indication comprises a signal corresponding to a network traffic status in order to manage the congestion in a network. Therefore, the combined system would have been enable to timing to transmission of packets out the egress system.

17. Regarding to claims 6, 16, Barri discloses network traffic status is represented by a color (see col. 2, lines 53-55, Green, Yellow and Red operating modes are defined to increase data input, reduce data input and reduce data input drastically, respectively).

18. In the claim 7, the combined system (Arunachalam – Barri – Reininger) discloses the limitations of claim 1 above.

However, the combined system (Arunachalam –Barri) is silent to disclosing second router making a profile change recommendation to a network operator.

Pashtan discloses second router (network element 422, 412, 421) making a profile change recommendation to a network operator (the network management element 330) (see figure 3, col. 5, lines 9-11).

Both Arunachalam, Barri, and Reininger, and Pashtan discloses Quality of Service, QoS, differentiated services. Pashtan recognizes second router making a profile change recommendation to a network operator. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined system (Arunachalam – Barri – Reininger) with the teaching of Pashtan to provide second router making a profile change recommendation to a network operator in order to manage the congestion in a network. Therefore, the combined system would have been enable to timing to transmission of packets out the egress system.

19. In the claims 8, 9, Reininger discloses second router renegotiating a constraint of network (see col. 8, lines 63-67).

20. In the claim 14, claim 14 is rejected the same reason of claim 4 above.

21. In the claim 15, claim 15 is rejected the same reason of claim 5 above.

22. In the claim 16, claim 16 is rejected the same reason of claim 6 above.

23. In the claims 17, 18, claims 17, 18 are rejected the same reason of claims 8, 9 above.

24. In the claims 22, 23, claims 22, 23 are rejected the same reason of claims 8, 9 above.

25. In the claim 24, claim 24 is rejected the same reason of claim 4 above.

26. In the claim 25, claim 25 is rejected the same reason of claim 5 above.

27. In the claim 26, claim 26 is rejected the same reason of claim 5 above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHUONG T. HO whose telephone number is (571) 272-3133. The examiner can normally be reached on 8:00 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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